Panasonic
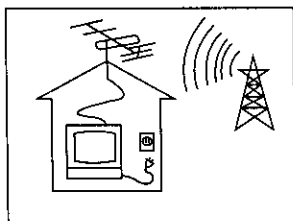
Operating Instruction

Colour Television
TX-21PS52Z

Please read the operating instructions completely before operating this set.
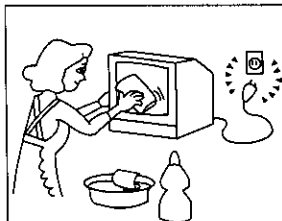
Dear Panasonic customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new colour television.
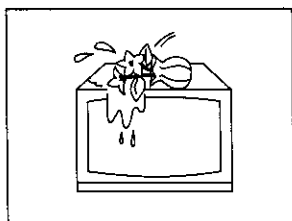
Safety Instructions

The TV set can be operated on AC AUTO 110-240V, 50/60Hz.

The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the plug from the wall outlet.
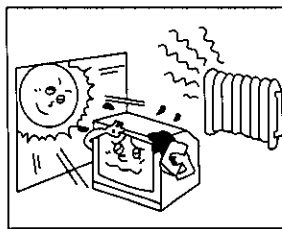
The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
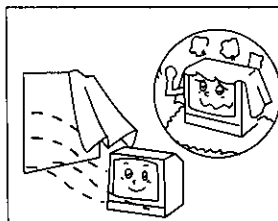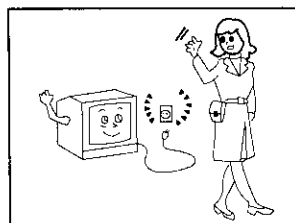
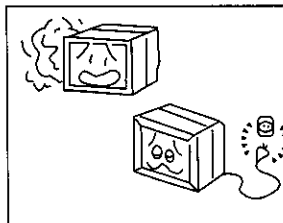Adequate ventilation is essential to prevent failure of electrical components.
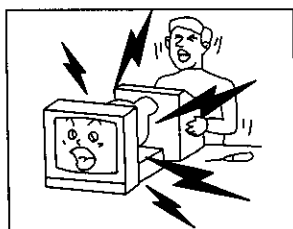
Do not remove the rear cover, as live parts are accessible when it is removed.

Avoid exposing the TV set to direct sunlight and other source of heat.

Remove the plug from the wall outlet (Power point) when the TV set is not used for a prolonged period of time.

Do not use this set if abnormal operation occurs. EX: smoke, odd sounds or smells, turn the power switch off and disconnect the AC power if you notice any unusual operation.

Before Operating This Set

Connect the Aerial Cable to the RF In Terminal

VHF Aerial

UHF Aerial

Mixer

75Ω Coaxial Cable

RF In Terminal

Coaxial Aerial plug
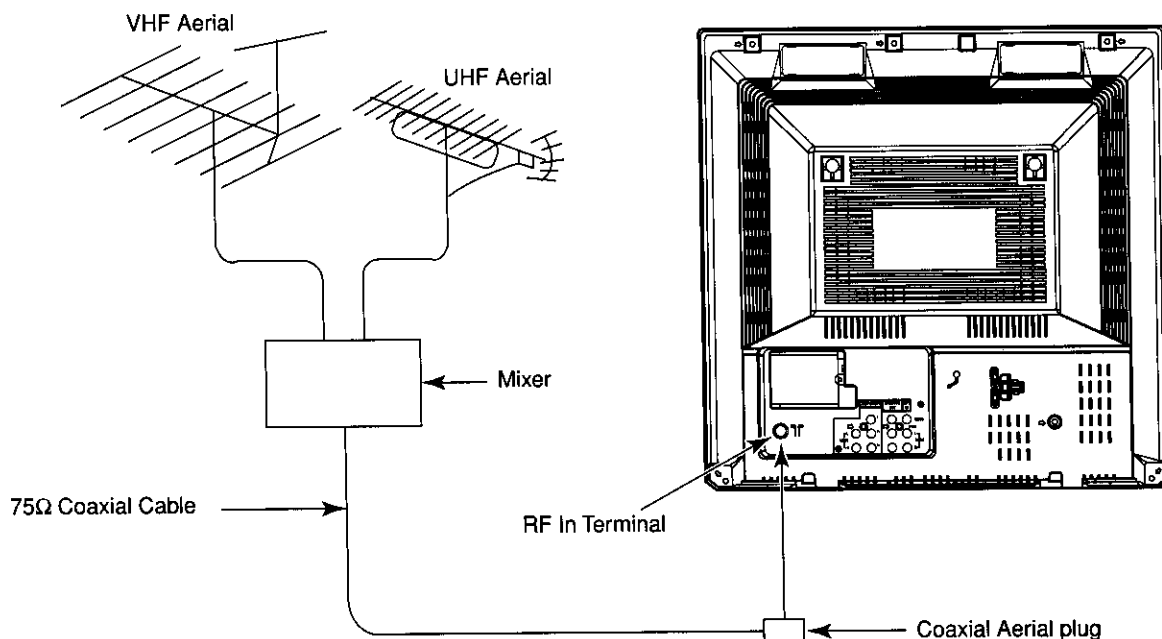
To obtain the best quality picture and sound, an external antenna, the correct cables (75 Ohm coaxial) and the correct terminating plug will be required.

If a communal antenna system is used, you may require the correct connection cable and plugs between the wall antenna socket and your television receiver.

Your local Television Service Dealer may be able to assist you in obtaining the correct antenna system for your particular area and accessories required.

Any matters about antenna installation, upgrading of existing systems or accessories required, and the cost incurred, are the responsibility of the customer.
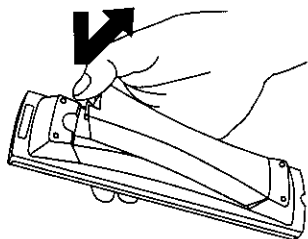
Note :
If your existing antenna system uses 300 Ohm to 75 Ohm Balun, see Below.

300 Ohm to 75 Ohm Balun

OR

300 Ohm Ribbon

75 Ohm Coaxial Cable
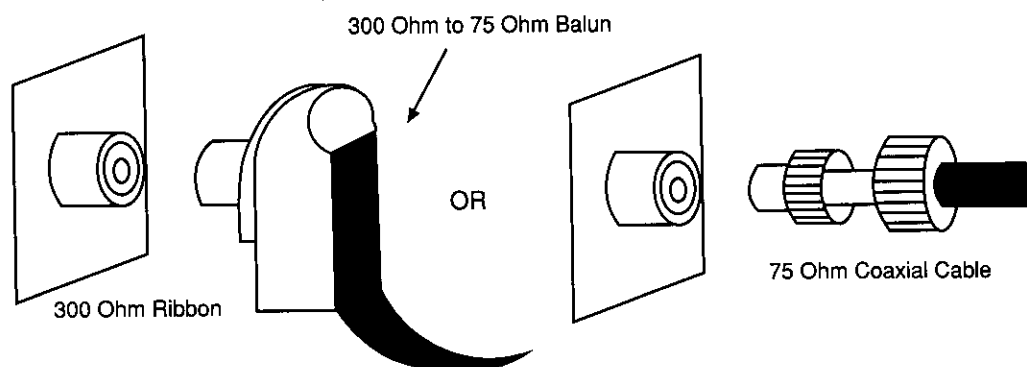
Before Operating This Set
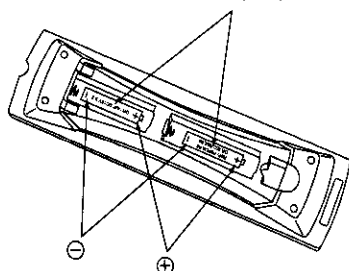
Battery Installation

1.

Open the cover.
Press bottom downward and pull out the cover.
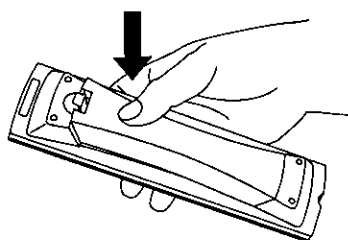
2.

Two "R6 (AA)" size

⊖   ⊕

Batteries: Use two "R6 (AA)" size batteries.
Insert the batteries ensuring correct polarity.
This is identifiable by the "+" and "−" symbols on both the batteries and inside the battery compartment.
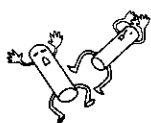
3.

Replace the cover.

Do not use rechargeable (Ni-Cd) batteries.
They are different in shape and performance and may fail to ensure correct operation.
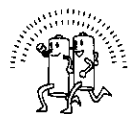
⚠ Battery cautions

The incorrect use of batteries can cause electrolyte leakage which will corrode the Remote Control or cause the batteries to burst.

Old Batteries   New Batteries

Replacement both batteries at the same time.
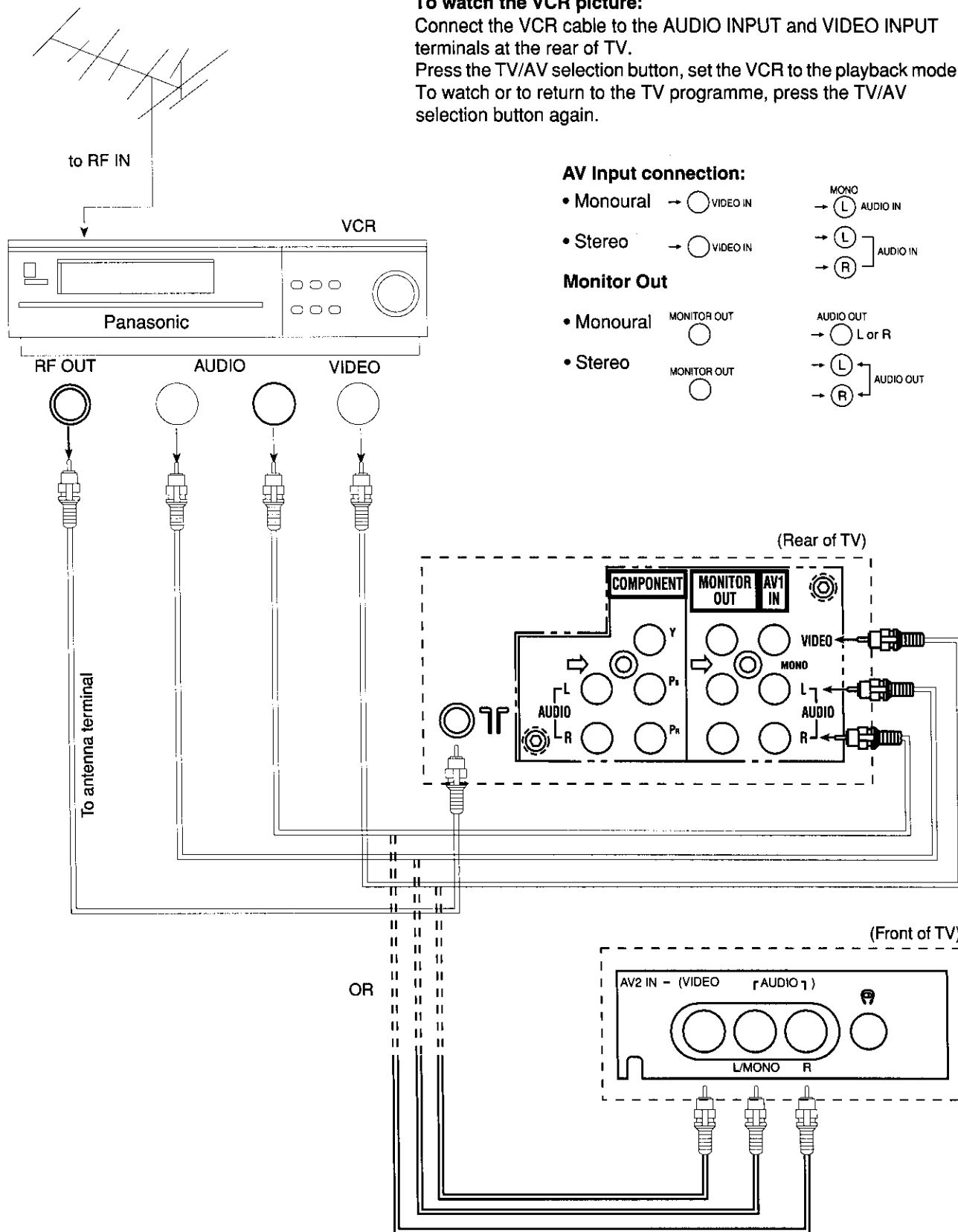
Don't mix battery types
(alkaline with carbon, zinc. etc.)

Don't Recharge.

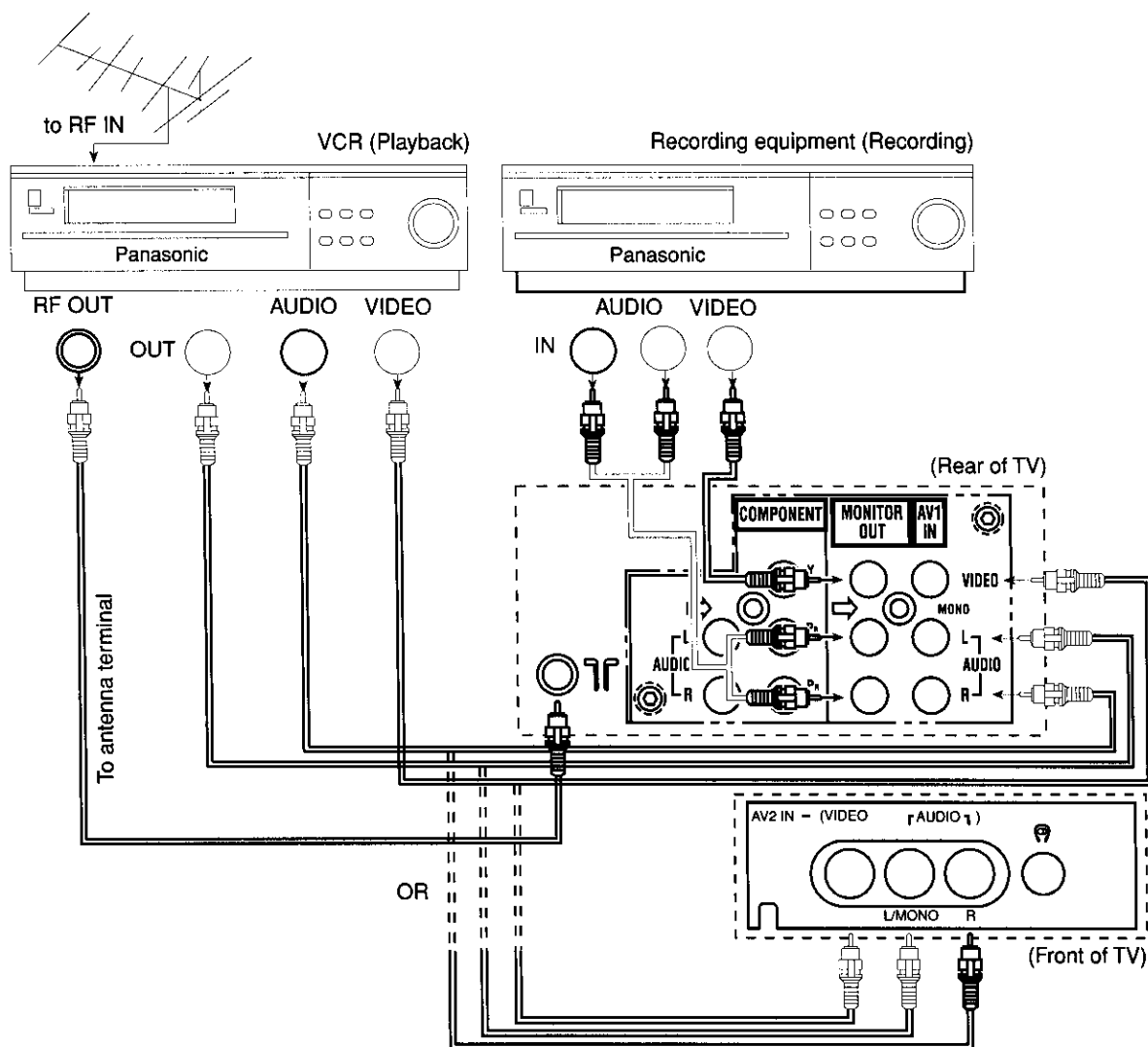# Connections (Audio Input and Video Input)

To watch the VCR picture:
Connect the VCR cable to the AUDIO INPUT and VIDEO INPUT terminals at the rear of TV.
Press the TV/AV selection button, set the VCR to the playback mode.
To watch or to return to the TV programme, press the TV/AV selection button again.

to RF IN

VCR

Panasonic

RF OUT   AUDIO   VIDEO

AV Input connection:

• Monoural → ◯ VIDEO IN   MONO → Ⓛ AUDIO IN

• Stereo → ◯ VIDEO IN   → Ⓛ
                                → Ⓡ AUDIO IN

Monitor Out

• Monoural MONITOR OUT ◯   AUDIO OUT → ◯ L or R

• Stereo MONITOR OUT ◯   → Ⓛ
                                → Ⓡ AUDIO OUT

To antenna terminal

(Rear of TV)

COMPONENT	MONITOR OUT	AV1 IN
Y		VIDEO
		MONO
L AUDIO R	Pв Pв	L AUDIO R

OR

(Front of TV)

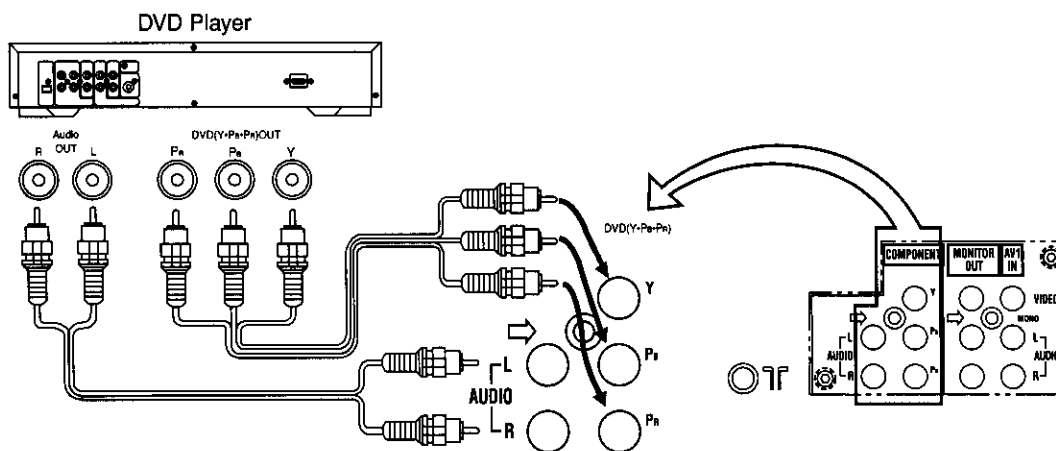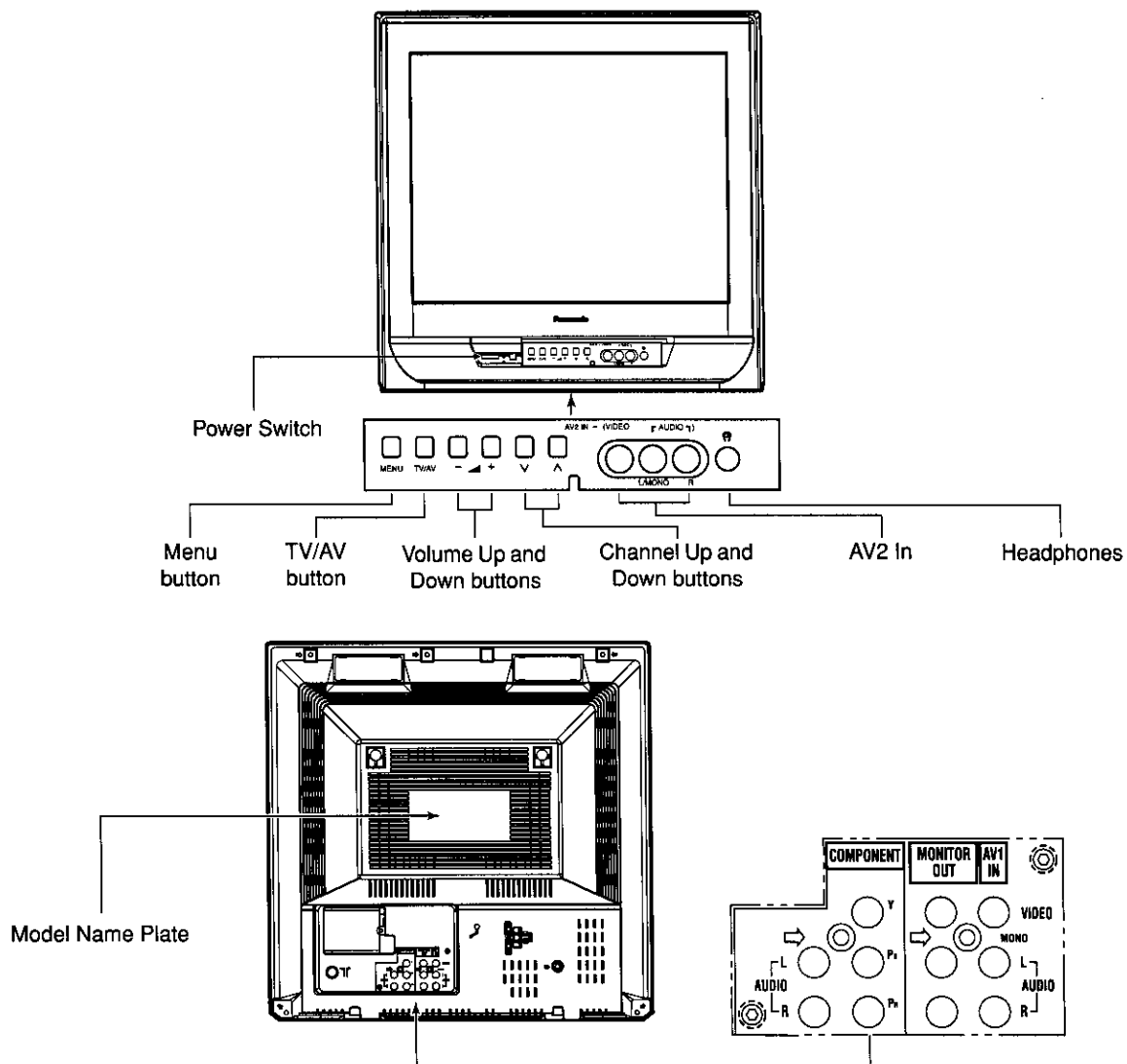AV2 IN − (VIDEO ┌AUDIO┐)

L/MONO   R

Recording

Follow the connection shown below when you want to copy a programme from another tape (VCR).
You can either use the AV input at the back or the front of the TV.

to RF IN

VCR (Playback)

Recording equipment (Recording)

Panasonic

Panasonic

RF OUT   AUDIO   VIDEO   AUDIO   VIDEO

OUT   IN

To antenna terminal

(Rear of TV)

COMPONENT | MONITOR OUT | AV1 IN

VIDEO

MONO

AUDIO

AUDIO

OR

AV2 IN — (VIDEO   AUDIO)

L/MONO   R

(Front of TV)

Connections (DVD Input)

DVD Player

Audio OUT   DVD(Y·PB·PR)OUT
R   L   PR   PB   Y

DVD(Y·PB·PR)

L
AUDIO
R

COMPONENT | MONITOR OUT | AV1 IN

VIDEO

MONO

AUDIO

6

Location of Control (TV)

Power Switch

| Menu button | TV/AV button | Volume Up and Down buttons | Channel Up and Down buttons | AV2 In | Headphones |

Model Name Plate

COMPONENT MONITOR OUT AV1 IN

VIDEO
Y
MONO
L
AUDIO
Pᵦ
R
Pᵣ
L
AUDIO
R

Connecting headphones
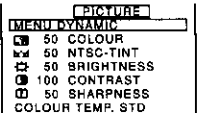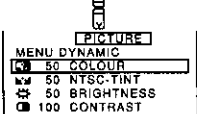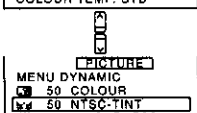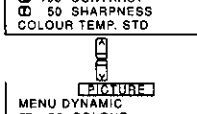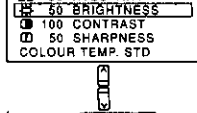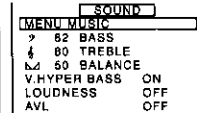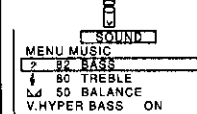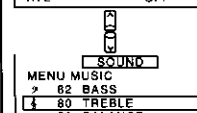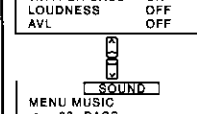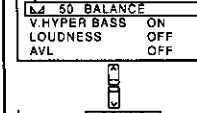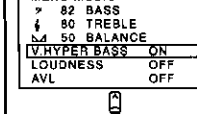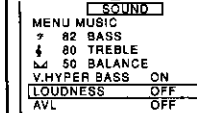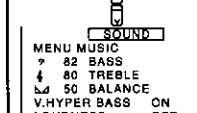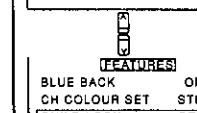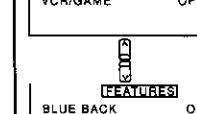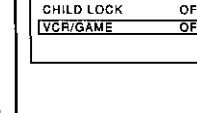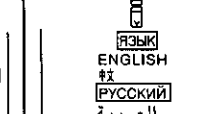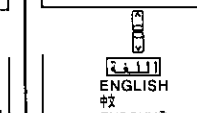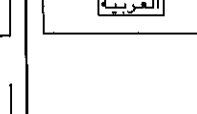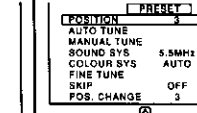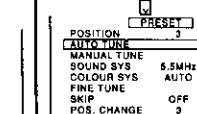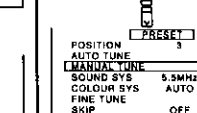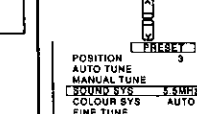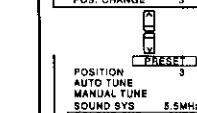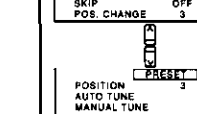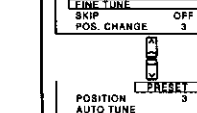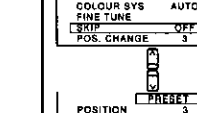
When a headphones plug is inserted into the Headphones socket all speakers will be automatically disconnected; only the Headphones will function.

AV2 IN – (VIDEO   ┌ AUDIO ┐)

L/MONO   R

(Optional)
(Not supplied)
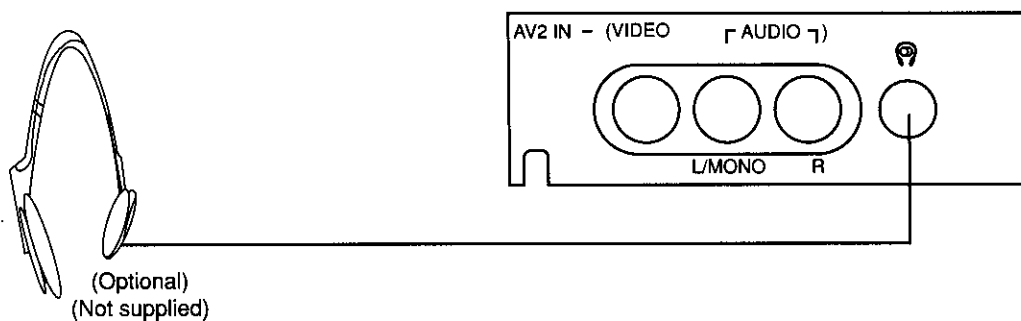
Flow Chart of Main Menu

When the "MENU" button is pressed at the main menu screen, the screen display will return to the normal viewing condition. When the "MENU" button is pressed at each MENU screen (Picture, Sound, Features, Language, Preset), the screen display will return to the Main Menu screen.

Note: The Main Menu screen display also can be operated using panel key (MENU, Volume Up or Down and Programme Number Up or Down buttons).

Press	MENU ○				
Select	(—) (+)				
Symbol Mark	🖻	🔊	👣	🗣	🎛
On-Screen Indication	[PICTURE]	[SOUND]	[FEATURES]	[LANGUAGE] [ENGLISH] 中文 РУССКИЙ العربية	[PRESET]
Press	▽ or (OK)	▽ or (OK)	▽ or (OK)	▽ or (OK)	▽ or (OK)

On-Screen Indication (example)

Column 1 — PICTURE:

```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```
↓
```
[PICTURE]
MENU DYNAMIC
 50  COLOUR
 50  NTSC-TINT
 50  BRIGHTNESS
 100 CONTRAST
 50  SHARPNESS
COLOUR TEMP. STD
```

Column 2 — SOUND:

```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```
↓
```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```
↓
```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```
↓
```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```
↓
```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```
↓
```
[SOUND]
MENU MUSIC
 82  BASS
 80  TREBLE
 50  BALANCE
V.HYPER BASS  ON
LOUDNESS      OFF
AVL           OFF
```

Column 3 — FEATURES:

```
[FEATURES]
BLUE BACK        ON
CH COLOUR SET    STD
CHILD LOCK       OFF
VCR/GAME         OFF
```
↓
```
[FEATURES]
BLUE BACK        ON
CH COLOUR SET    STD
CHILD LOCK       OFF
VCR/GAME         OFF
```
↓
```
[FEATURES]
BLUE BACK        ON
CH COLOUR SET    STD
CHILD LOCK       OFF
VCR/GAME         OFF
```
↓
```
[FEATURES]
BLUE BACK        ON
CH COLOUR SET    STD
CHILD LOCK       OFF
VCR/GAME         OFF
```

Column 4 — LANGUAGE:

```
ENGLISH
中文
РУССКИЙ
العربية
```
↓
```
ЯЗЫК
ENGLISH
中文
РУССКИЙ
العربية
```
↓
```
اللغة
ENGLISH
中文
РУССКИЙ
العربية
```

Column 5 — PRESET:

```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```
↓
```
[PRESET]
POSITION       3
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS  AUTO
FINE TUNE
SKIP        OFF
POS. CHANGE  3
```

8

General Operation

1.

To Switch Power on/off

The TV set must be switched on at the wall outlet and at the Main power switch.
Press this button to turn the TV set ON, from stand-by mode. Press it again to turn off.

Note:

When in the stand-by condition, it is possible to turn the TV set on by pressing the Direct Programme Number Selection button (0-9) or the Programme Number Up and Down button.

2.
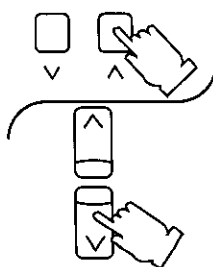
Programme Number Selection

Press the Programme Number Up "∧" or Down "∨" button to select the next higher or lower Programme Number.
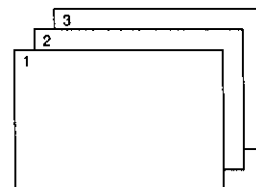
3.
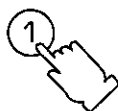
Direct Programme Number Selection (0 - 9)

e.g. To select Programme Number "1", press the "1" button.

4.

Two Digit Programme Number Selection

e.g. To select Programme Number "18".

Press the (–) button.
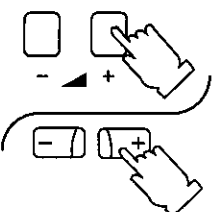
Press the (1) button.

Press the (8) button.
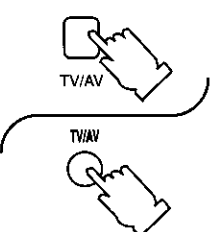
Setting range	0 ~ 99

9
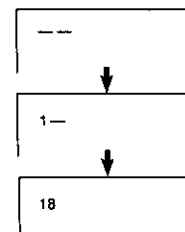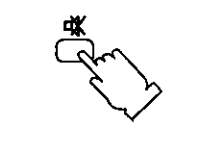
General Operation

5. **Volume Adjustment**

Press the Volume Up "+" or Down "−" button to increase or decrease the sound volume level.

◁ 5 VOLUME
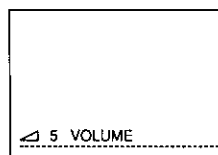
6. **TV / AV Selection**

Press the "TV/AV" button to select TV and AV1, AV2, COMPONENT input signal modes sequentially.

COMPONENT
AV 2
AV 1
7
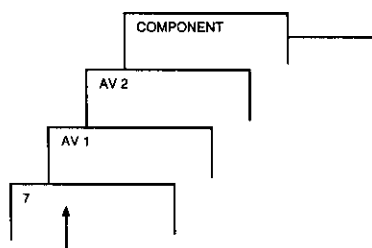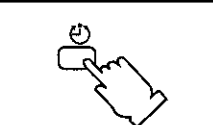
7. **Sound Mute Button**

Press this button to mute the Sound completely.
Press the button once again to restore the previous sound level, and cancel the mute.
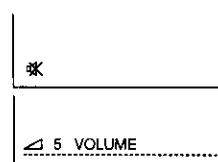
The "Mute" symbol will appear.
(Colour changes to Red)

◁ 5 VOLUME

8. **Recall Button**

Press the RECALL button to display the current system status. Press this button until display is cancelled.

9. **Off-Timer Button**

The TV set may be preset to switch to stand-by after a fixed period.
By pressing "Off-Timer" button, you can select the preset time either 30, 60, or 90 minutes.

30 → 60 → 90
0 ← AUTO
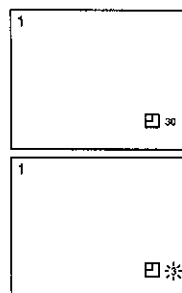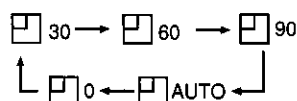
Note:

Setting Off-Timer to AUTO mode. If the set is not switched off, when the TV station ends broadcasting, it will automatically go to the stand-by condition after 5 minutes. This AUTO mode will not operate when the TV receiver is in AV mode/DVD mode.

How to cancel the Off-Timer setting:

1. Set the preset time condition to "0" mode by pressing the Off-Timer button.
2. Turning the TV set off.

10. PIC MENU
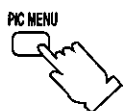
Picture Menu Operation

By pressing the PICTURE MENU button, you can sequentially select the Picture menus as shown below:

On-screen	Function
MENU DYNAMIC	For watching in brighter environments. This menu selects a higher than normal level of contrast.
MENU STANDARD	For watching in normal (evening) environments. This menu selects normal level of contrast.
MENU CINEMA	To realize the presence in a cinema environment when watching movies.

11. WAKE UP

Wake Up Timer Button

1. Press the "WAKE UP TIMER" button.

2. Press the Volume Up or Down button (Remote Control) to select the Wake Up Timer. Wake Up Timer will increase or decrease by 10 minutes when Up or Down button is pressed.
   Note :
   Wake Up Timer can be set up to 12 hours.

3. After setting the Wake Up Timer, switch the TV set to stand-by mode. LED light will blink ON and OFF during stand-by mode.

4. When the time Wake Up Timer has elapsed, the set will automatically switch on. Press any button to cancel the Wake Up Timer on screen display.
   Note :
   i) After the Wake Up Timer is set and the TV mode is still not switched off, the Wake Up Timer will continue to count down until the timer is off.
   ii) When Wake Up Timer switch ON the TV set, the off-timer is set to 90 minutes mode automatically. Press any button to cancel the off-timer. If no button is pressed, the TV set will switch off (Standby mode) automatically after 90 minutes.

5. To cancel the Wake Up Timer.
   You can choose any of the following:
   i) Switch off the main power.
   ii) Press the Volume Up or Down button, until OFF is reached, when Wake Up Timer OSD is displayed.
   iii) Press the Normalize button when Wake Up Timer OSD is displayed.

12. N
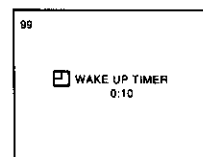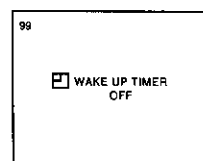
Normal (N) Button

By pressing the Normal "N" button on the Remote Control while Picture or Sound Control Function is displayed, the selected function will be changed to the Normal Mode. Normalization will not occur if the function is not displayed when the "N" button is pressed. The Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".

13. R-TUNE
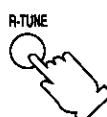
Rapid Tune Button

Press the button to access previously viewed channel.

PRESENT CHANNEL
BEING VIEWED

LAST VIEWED
CHANNEL
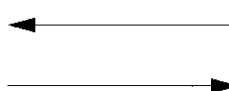
General Operation

14. SOUND MENU

Sound Menu Operation

By pressing the SOUND MENU button, you can sequentially select the Sound menus as shown below:

On-screen	Function
MENU MUSIC	For music programme for example.
MENU NEWS	Enable spoken voices to be heard more clearly. Perfect for news, documentaries and talk shows.
MENU CINEMA	Recreates the cinematic sound effect from your TV. This setting provides clear and crisp dialogue.

15. SURROUND

Surround Sound Operation

The benefit of surround sound are enormous. With additional speakers you can be completely enveloped in sound; just as if you were at a concert hall or cinema.
The surround effect does operate without external surround speakers, but is enhanced when they are connected. Such near surround speakers should not be sited in direct proximity to the listeners.

On-screen display during surround mode.

	Type of broadcast	On-screen display
TV mode	MONO	MONO SURROUND ↕ SURROUND OFF
TV mode	STEREO	STEREO SURROUND ↕ SURROUND OFF
AV mode	Select AV mode	STEREO SURROUND ↕ MONO SURROUND ↕ SURROUND OFF

Tuning Procedure

Position
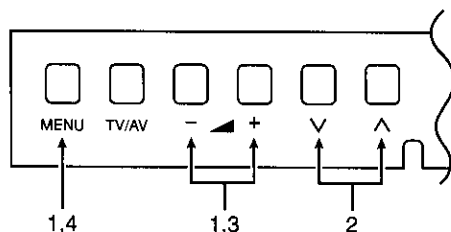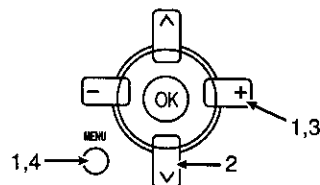
1.		Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.	
2.		Press the Channel Up "∧" or Down "∨" button, setting to "POSITION".	

"POSITION" condition.
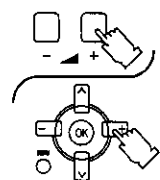
3.		Press the Volume Up "+" or Down "−" button to change the position number that you desired.	
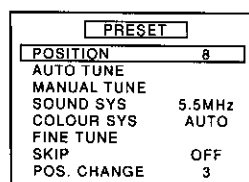
Note:
Position number also can be change by using Direct Programme Number Selection (0~9) and Two Digit Programme Number Selection (-/--).

4.		Press the "MENU" button twice.	
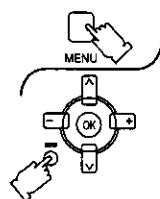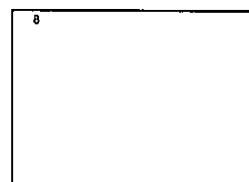
This returns the set to the normal viewing condition.

Tuning Procedure

Automatic Tune
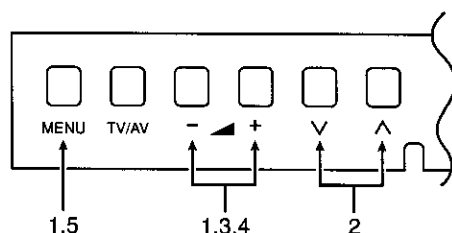
OR
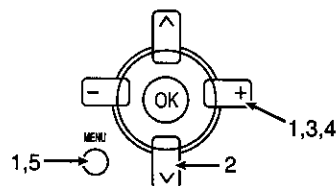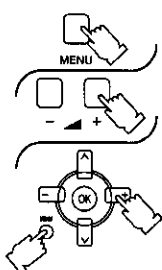
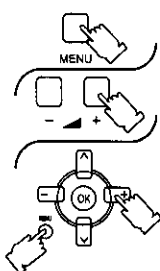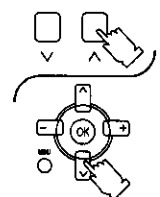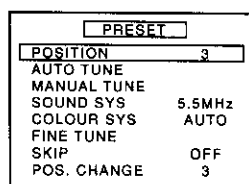|			
1.		Press the "MENU" button and Volume Up "+" or Down "–" button, until PRESET MENU is selected.	(PRESET)
2.		Press the Channel Up "∧" or Down "∨" button until "AUTO TUNE" function is selected.	PRESET POSITION 3 AUTO TUNE MANUAL TUNE SOUND SYS 5.5MHz COLOUR SYS AUTO FINE TUNE SKIP OFF POS. CHANGE 3 → PRESET POSITION 3 AUTO TUNE MANUAL TUNE SOUND SYS 5.5MHz COLOUR SYS AUTO FINE TUNE SKIP OFF POS. CHANGE 3
3.		Press the Volume Up "+" or Down "–" button.	AUTO TUNE / Search start. The best tuning position is automatically memorized.
4.		After all stations are tuned, the on-screen display will automatically change from "AUTO TUNE" to "SOUND SYS" Position. If necessary, press the Volume Up "+" or Down "–" button to improve the sound quality.	PRESET POSITION 3 AUTO TUNE MANUAL TUNE SOUND SYS 5.5MHz COLOUR SYS AUTO FINE TUNE SKIP OFF POS. CHANGE 3 / The sound indicator will change as follows: 4.5 MHz ⟷ 5.5 MHz ↕ ↕ 6.5 MHz ⟷ 6.0 MHz
5.		After all stations are tuned, press the "MENU" button twice.	This returns the set to the normal viewing condition.
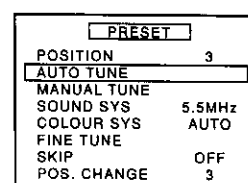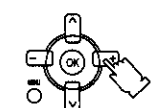
14
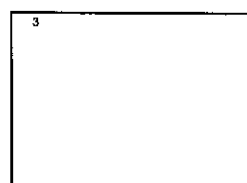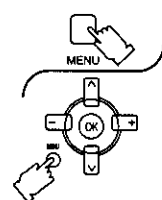
Tuning Procedure

Manual Tune
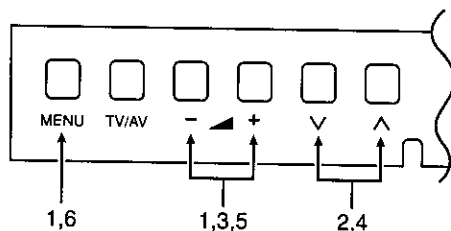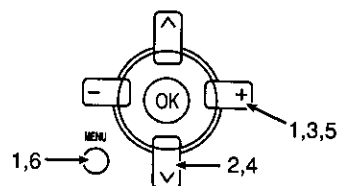
1.

Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.
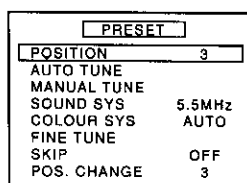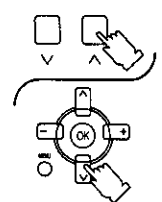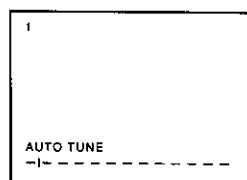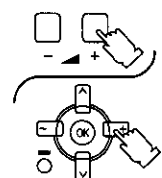

2.

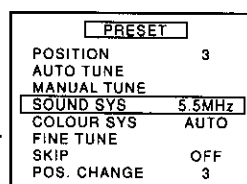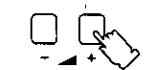Press the Channel Up "∧" or Down "∨" button until "MANUAL TUNE" function is selected.

PRESET	
POSITION	3
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF
POS. CHANGE	3

➡

PRESET	
POSITION	3
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF
POS. CHANGE	3

3.
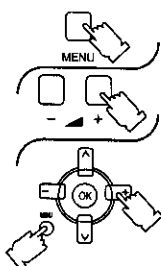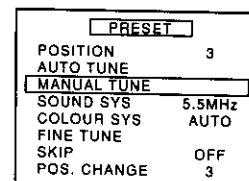
Press the Volume Up "+" or Down "−" button:

Volume "+": Next higher channel.
Volume "−": Next lower channel.

Search start.

PRESET	
POSITION	3
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF
POS. CHANGE	3

The best tuning position is automatically memorized.

4.

Press the Channel Down "∨" button, setting to "SOUND SYS".

PRESET	
POSITION	3
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF
POS. CHANGE	3
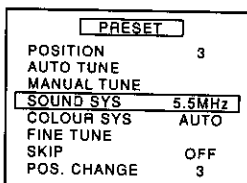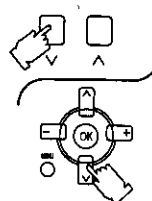
"SOUND SYS" condition.

15

Tuning Procedure

5.
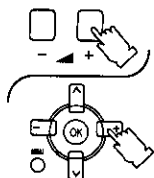
If the sound is not clear or no sound is produced on a Programme Number Position, press the Volume Up "+" or Down "–" button.

PRESET	
POSITION	3
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF
POS. CHANGE	3

You may improve the Sound quality. The sound indicator will change as follows:

4.5 MHz ←——→ 5.5 MHz
$\uparrow$ $\uparrow$
$\downarrow$ $\downarrow$
6.5 MHz ←——→ 6.0 MHz

6.
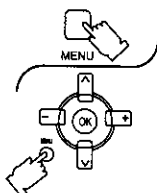
Press the "MENU" button twice.
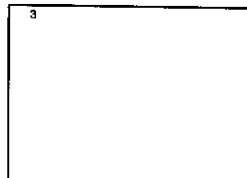
This returns the set to the normal viewing condition.

Tuning Procedure

Fine Tune
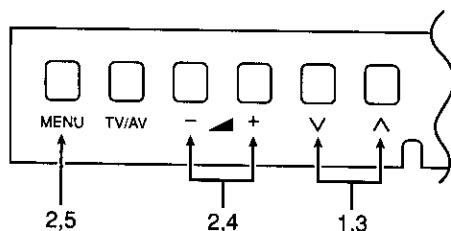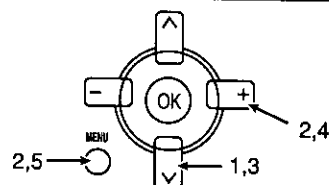
Under normal reception condition, this function is not used. However, in areas of poor reception or constant interference, a slight adjustment of the fine tuning can improve the picture and sound quality.
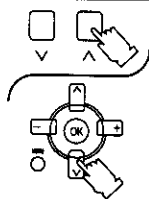
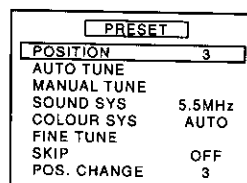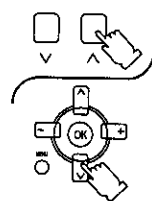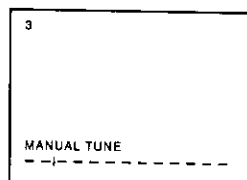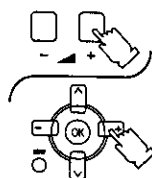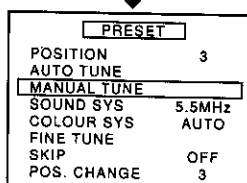|			
1.		Select the channel which you want to try to improve, using the Channel Up "∧" or Down "∨" button.	Select the desired Channel Number.
2.		Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.	
3.		Press the Channel Up "∧" or Down "∨" button until "FINE TUNE" is selected.	Fine Tune condition.
4.		Press the Volume Up "+" or Down "−" button until the clear picture is received.	Fine Tune start.
			The AFC function is deactivated. The "■" symbol appears to the left of the Channel Number.
5.		Press the "MENU" button twice.	This returns the set to the normal viewing condition.
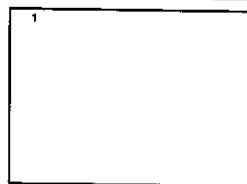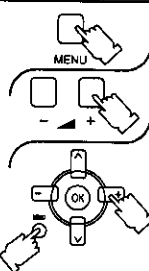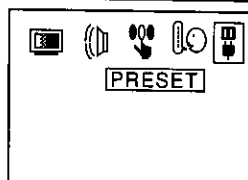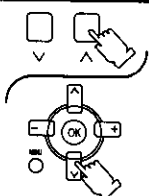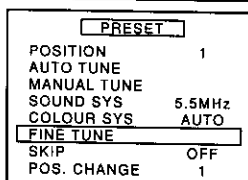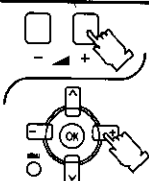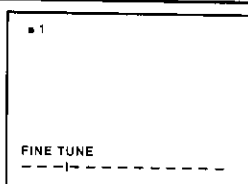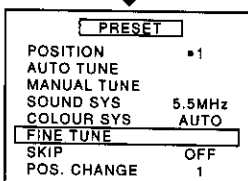
Screen content for step 2: PRESET

Screen content for step 3:

```
        PRESET
POSITION          1
AUTO TUNE
MANUAL TUNE
SOUND SYS      5.5MHz
COLOUR SYS      AUTO
FINE TUNE
SKIP            OFF
POS. CHANGE       1
```

Screen content for step 4: FINE TUNE

```
        PRESET
POSITION         ■1
AUTO TUNE
MANUAL TUNE
SOUND SYS      5.5MHz
COLOUR SYS      AUTO
FINE TUNE
SKIP            OFF
POS. CHANGE       1
```
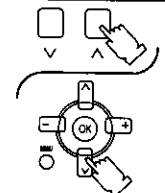
How to Cancel the Fine Tuning
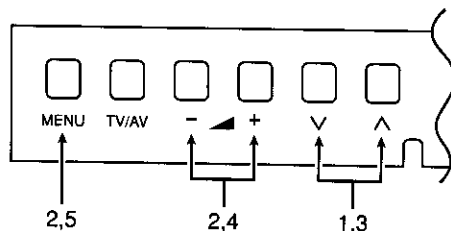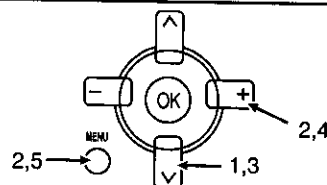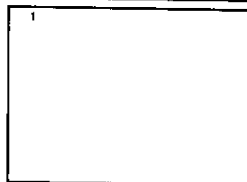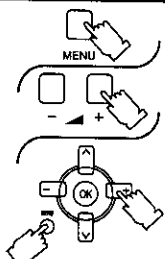
Cancelling previously adjusted (manually) Fine Tuning, means reactivating the AFC (Automatic Frequency Control) function, also known as AFT (Automatic Frequency Tuning). Reactivating the Automatic Fine Tuning means allowing the set to automatically tune optimum tuning position, for that Channel Number.
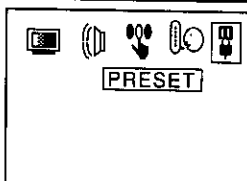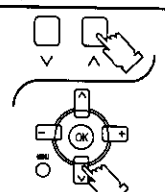
|			
1.		Select the "AFC OFF" Channel Number which you want to return to Automatic Frequency Control (Cancel the manual fine tuning).	"AFC OFF" Channel Number are indicated to you by the "▪" symbol to the left of the Channel Number.
2.		Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.	
3.		Press the Channel Up "∧" or Down "∨" button until "MANUAL TUNE" function is selected.	Manual Tune condition.
4.		Press the Volume Up "+" or Down "−" button briefly.	The best tuning position is automatically memorized.
5.		Press the "MENU" button twice.	This returns the set to the normal viewing condition.
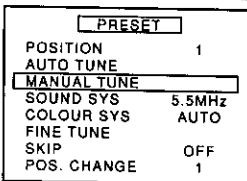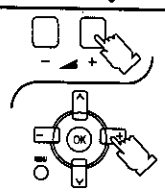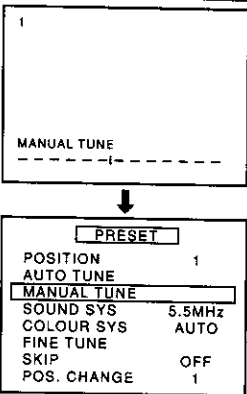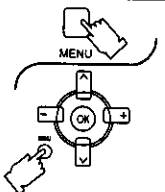
18

Tuning Procedure

How to Skip Programme Number

OR
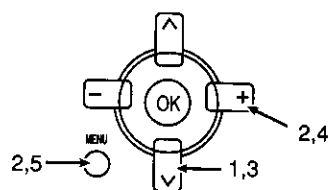
1.	Select a Programme Number you want to skip, by pressing the Channel Number Up "∧" or Down "∨" button.	
2.	Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.	
3.	Press the Channel Up "∧" or Down "∨" button until "SKIP" function is selected.	Channel Skip condition.
4.	Press the Volume Up "+" or Down "−" button.	The displayed "OFF" condition changes to "ON".
5.	Press the "MENU" button twice.	This returns the set to the normal viewing condition.

Step 3 screen:

```
        [ PRESET ]
POSITION           1
AUTO TUNE
MANUAL TUNE
SOUND SYS      5.5MHz
COLOUR SYS      AUTO
FINE TUNE
SKIP             OFF
POS. CHANGE        1
```

Step 4 screen:

```
        [ PRESET ]
POSITION           1
AUTO TUNE
MANUAL TUNE
SOUND SYS      5.5MHz
COLOUR SYS      AUTO
FINE TUNE
SKIP              ON
POS. CHANGE        1
```

19

Tuning Procedure

How to Cancel the Skip Function

1. Select the skipped Programme by pressing the Channel Number Up "∧" or Down "∨" button.

2. Press the "MENU" button and Volume Up "+" or Down "−" button until PRESET MENU is selected.

PRESET

3. Press the Channel Up "∧" or Down "∨" button until "SKIP" function is selected.

PRESET
POSITION   1
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS   AUTO
FINE TUNE
SKIP   ON
POS. CHANGE   1

Channel Skip condition.

4. Press the Volume Up "+" or Down "−" button.

PRESET
POSITION   1
AUTO TUNE
MANUAL TUNE
SOUND SYS   5.5MHz
COLOUR SYS   AUTO
FINE TUNE
SKIP   OFF
POS. CHANGE   1

The displayed "ON" condition changes to "OFF".

5. Press the "MENU" button twice.
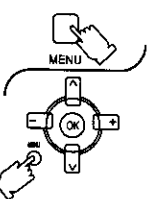
This returns the set to the normal viewing condition.

Tuning Procedure

Colour System Selection

Use this function if a clear picture with weak colour is obtained when a Broadcast or AV signal is received.
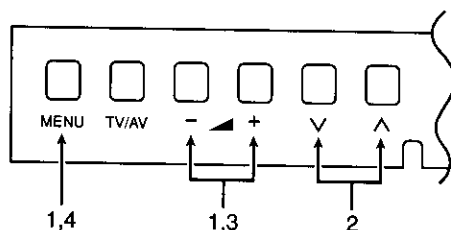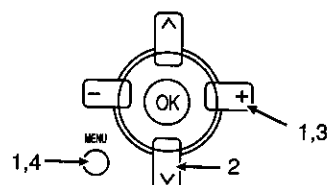
OR
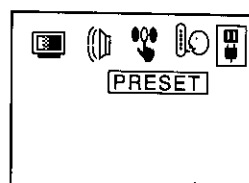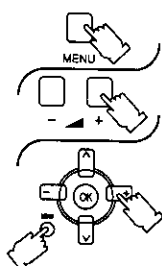
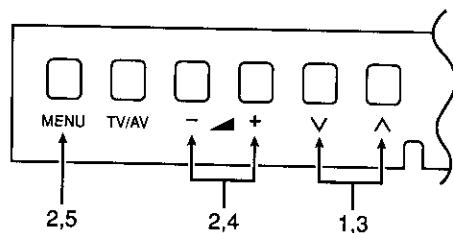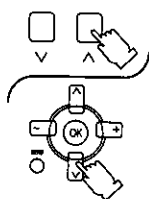|		
1.	Press the "MENU" button and Volume Up "+" or Down "–" button, until PRESET MENU is selected.	
2.	Press the Channel Up "∧" or Down "∨" button until "COLOUR SYS" is selected.	Colour System condition.
3.	Press the Volume Up "+" or Down "–" button repeatedly until the optimum image is produced.	The Colour System will change as shown: AUTO ⟷ PAL ⟷ SECAM NTSC 3.58 ⟷ NTSC 4.43
4.	Press the "MENU" button twice.	This returns the set to the normal viewing condition. This selected Colour System is automatically memorized.
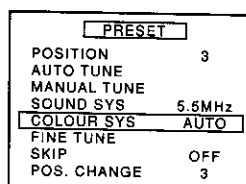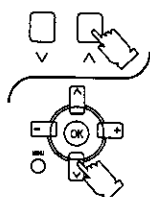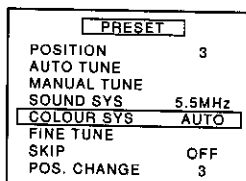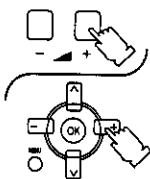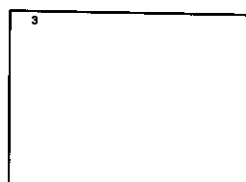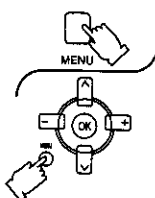
21

Sound System Selection

This function is used only in the TV mode, and is not applicable in AV mode. When the sound is not clear or no sound is produced on a channel.
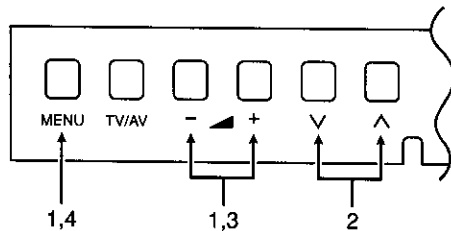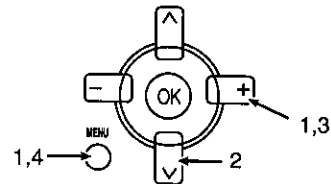
1. Press the "MENU" button and Volume Up "+" or Down "−" button, until PRESET MENU is selected.
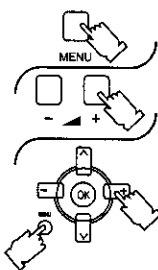
2. Press the Channel Up "∧" or Down "∨" button until "SOUND SYS" is selected.

```
        ┌─ PRESET ─┐
POSITION          3
AUTO TUNE
MANUAL TUNE
SOUND SYS     5.5MHz
COLOUR SYS    AUTO
FINE TUNE
SKIP          OFF
POS. CHANGE   3
```
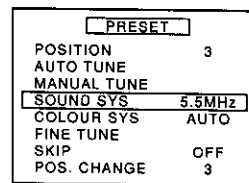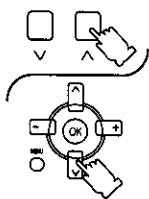
Sound System condition.

3. Press the Volume Up "+" or Down "−" button repeatedly until the optimum sound is obtained.

```
        ┌─ PRESET ─┐
POSITION          3
AUTO TUNE
MANUAL TUNE
SOUND SYS     5.5MHz
COLOUR SYS    AUTO
FINE TUNE
SKIP          OFF
POS. CHANGE   3
```
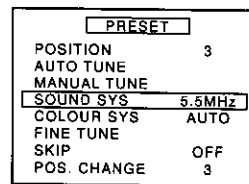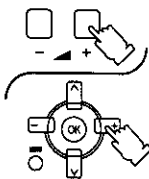
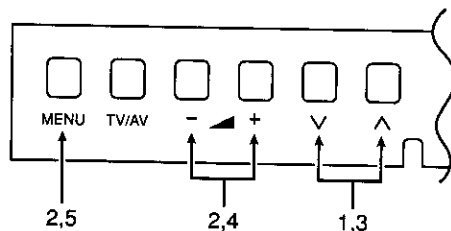The Sound System will change as shown:

4.5 MHz ⟷ 5.5 MHz

6.5 MHz ⟷ 6.0 MHz

4. Press the "MENU" button twice.
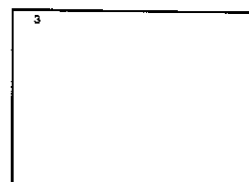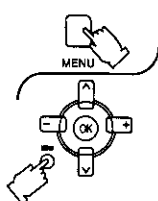
This returns the set to the normal viewing condition.

This selected Sound System is automatically memorized.

22

Pos. Change

This feature will enable the user to swap (Exchange) channel memory of 2 selected channels. The position change function allows one to shift from the present channel to any Programme Number without any tuning process.

1. Press the "MENU" button and Volume Up "+" or Down "–" button, until PRESET MENU is selected.
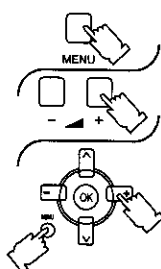
2. Press the Channel Up "∧" or Down "∨" button until "POS. CHANGE" is selected.

```
        ┌──PRESET──┐
POSITION            3
AUTO TUNE
MANUAL TUNE
SOUND SYS        5.5MHz
COLOUR SYS       AUTO
FINE TUNE
SKIP               OFF
│POS. CHANGE        3  │
```
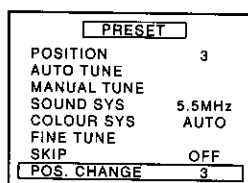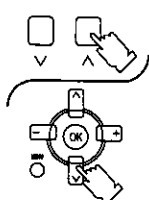
3. Select a Programme Number you want to change by pressing either Volume Up "+" or Down "–" button, two digit programme selection or Direct Programme number selection on the Remote Control.
(Position Change will only exist in preset mode).

```
        ┌──PRESET──┐
POSITION            3
AUTO TUNE
MANUAL TUNE
SOUND SYS        5.5MHz
COLOUR SYS       AUTO
FINE TUNE
SKIP               OFF
│POS. CHANGE       12  │
```
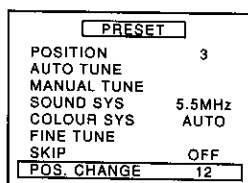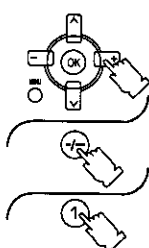
Note:
Position Change also can be operated using panel key. Use MENU key to move POSITION CHANGE, then use Volume Up/Down to change the channel to be swapped to. Use TV/AV to confirm.

4. Press the "TV/AV" button to confirm.

```
        ┌──PRESET──┐
POSITION           12
AUTO TUNE
MANUAL TUNE
SOUND SYS        5.5MHz
COLOUR SYS       AUTO
FINE TUNE
SKIP               OFF
│POS. CHANGE       12  │
```
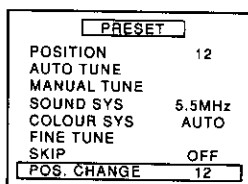
5. Press the "MENU" button twice.
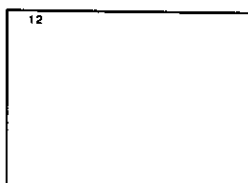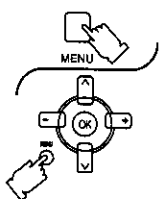
This returns the set to the normal viewing condition.

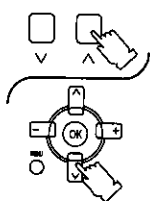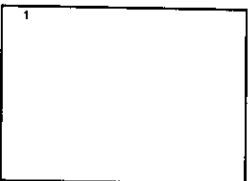# Advanced Remote Control Transmitter Operation

Picture Menu Operation
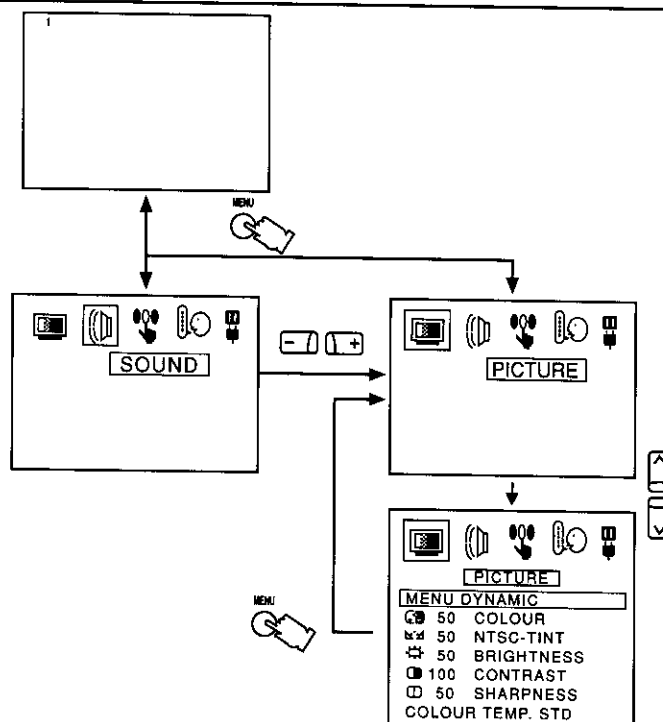
Picture Menu

Press	Item	Effect	Indicator
Select	MENU DYNAMIC	MENU DYNAMIC ↔ MENU STANDARD / MENU CINEMA	MENU DYNAMIC
Select	COLOUR	Less — More	50 COLOUR
Select	NTSC-TINT	Greenish — Reddish	50 NTSC-TINT
Select	BRIGHTNESS	Darker — Brighter	50 BRIGHTNESS
Select	CONTRAST	Less — More	100 CONTRAST
Select	SHARPNESS	Less — More	50 SHARPNESS
Select	COLOUR TEMP. STD	COLOUR TEMP. STD ↔ COLOUR TEMP. COOL / COLOUR TEMP. WARM	COLOUR TEMP. STD

Note: The Picture Menu screen display also can be operated using panel key (MENU, Volume Up or Down and Programme Number Up or Down buttons).

Helpful Hint

1. By pressing the normal "N" button on the Remote Control while the Picture menu is displayed, the setting of the selected function will be return to factory setting level.

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Sound Menu Operation
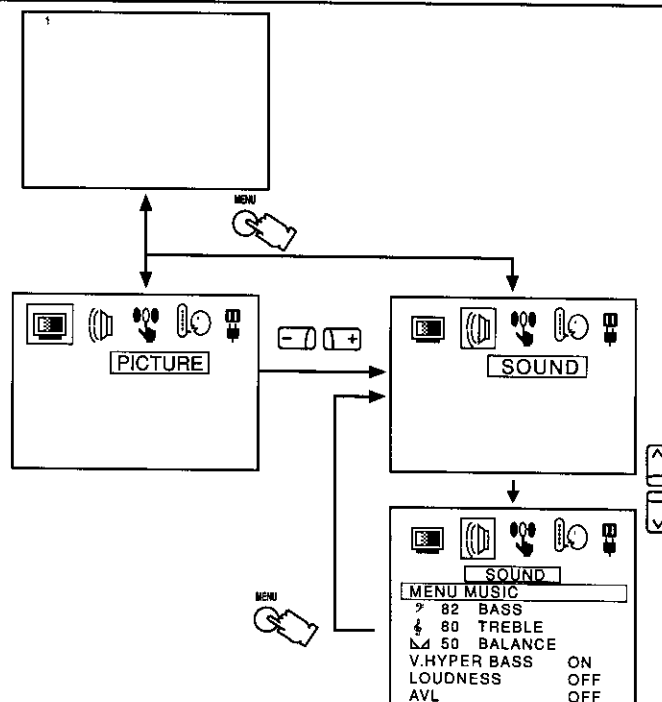
Sound Menu

Press	Item	Effect	Indicator
Select	MENU MUSIC	┌→MENU MUSIC ↔ MENU NEWS ←┐ └──→ MENU CINEMA ←──┘	MENU MUSIC
Select	BASS	Less More	♪ 82 BASS
Select	TREBLE	Less More	♪ 80 TREBLE
Select	BALANCE	Left SP. Right SP.	⋈ 50 BALANCE
Select	V.HYPER BASS	ON ↔ OFF	V.HYPER BASS
Select	LOUDNESS	ON ↔ OFF	LOUDNESS
Select	AVL	ON ↔ OFF	AVL

Note: The Sound Menu screen display also can be operated using panel key (MENU, Volume Up or Down and Programme Number Up or Down buttons).

V.HYPER BASS (VHB)

The Virtual Hyper Bass (VHB) create and reproduce lower and heavy bass sound by boosting up the low frequency. With VHB listener now can listen to the low and heavy bass which previously cannot. The V. HYPER BASS mode will change as shown:

ON ↔ OFF

AVL (Auto Volume Limiter)

The AVL function will limit the volume output for music, speech and movie at preset level when it is on.

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Features Menu Operation
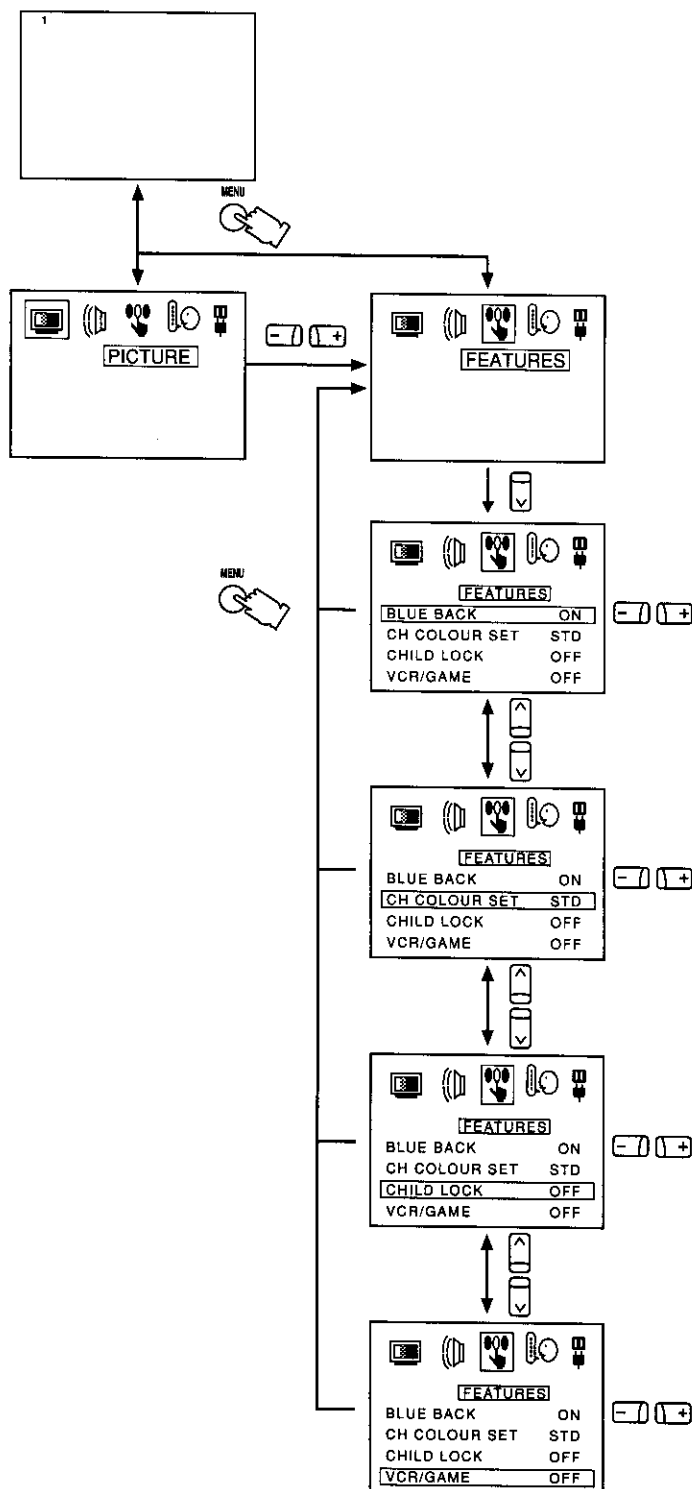
BLUE BACK Mode

When no picture signal is received, or the signal is weak, the screen reverts to a blue background colour and the sound is muted.

Disable this features to continue watching very weak signals.

Blue background colour if no input picture signal or input signal is weak.
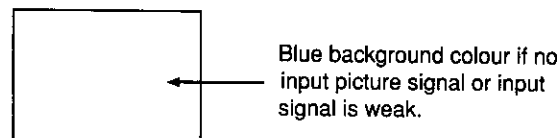
CH (Channel) COLOUR SET Mode

Colour density varying between broadcast channels can be adjusted to three levels for each reception channel as follows :

STD ⟷ HIGH ⟷ LOW

CHILD LOCK Mode

To child lock any channel, press the Volume Up or Down button (Remote Control) until CHILD LOCK is received.

1) When channel is "LOCK", sound is muted and screen becomes blue colour.
2) If any of the 100 channels is CHILD LOCK ON, then preset menu is restricted from entering, when panel key is pressed. In addition, if Channel Up/Down at panel key is pressed, OSD message "CHILD LOCK ON" will be displayed on screen indicating the channel is being locked.
3) Main power ON in child locked channel will display "CHILD LOCK ON" on screen to remind user that the Child lock is On and is in Child locked channel.
4) Each channel has its own memory for channels to be child locked.

VCR/GAME Mode

Reproduction of irregular signals, such as TV games and rental video tapes, may be improved.

The VCR/GAME mode will change as shown.

ON ⟷ OFF

Note: The Features Menu screen display also can be operated using panel key (MENU, Volume Up or Down and Programme Number Up or Down buttons).

Language Menu Operation

Language Menu

Press the "Channel Up or Down" button. The on-screen language display will change as follows :

Note:
The Language Menu screen display also can be operated using panel key (MENU, Volume Up or Down and Programme Number Up or Down buttons).
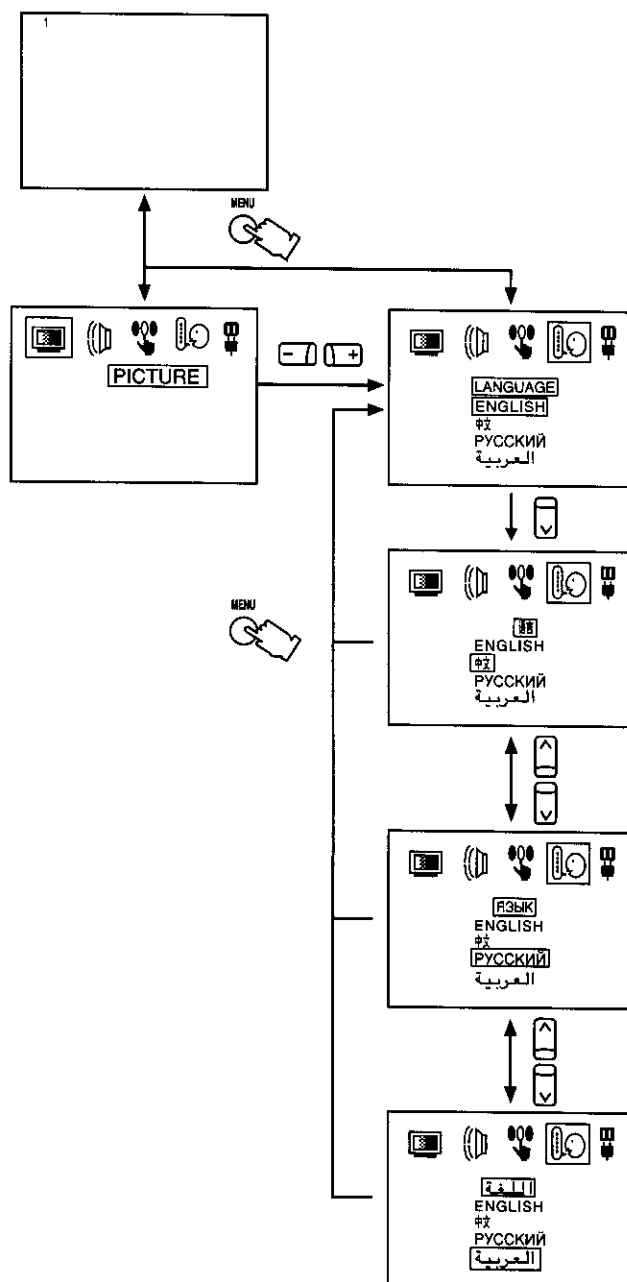
1. Stereo Reception
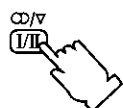
Stereo/Bilingual Sound Selection Button

Sound output modes can be selected by pressing the "Sound Selection" button.

STEREO, BILINGUAL (if transmitted) and MONO modes can be selected using this button.

	Types of Broadcast	On-screen Indication	Remarks
NICAM Digital Stereo	Regular Broadcast (Standard Audio)		Normal use.
	Regular + NICAM MONO I [MAIN <I>]	MAIN <I> ←→ MONO	You can select either the "MAIN <I>" or "MONO" audio signal.
	NICAM STEREO	STEREO ←→ MONO	You can select either the "STEREO" or "MONO" mode.
	NICAM DUAL MONO MAIN <I> / SUB <II>	MONO / SUB <II> / MAIN <I>	You can select either the "MAIN <I>", "SUB <II>" or "MONO".
A2 (German) Stereo	Regular Broadcast (Standard Audio)		Normal use.
	BILINGUAL or DUAL MONO MAIN <I> / SUB <II>	MAIN <I> ←→ SUB <II>	You can select either the "MAIN <I>" or "SUB <II>" audio signal.
	STEREO	STEREO ←→ MONO	You can select either the "STEREO" or "MONO" mode.

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Remote control setting for VCR's and DVD's
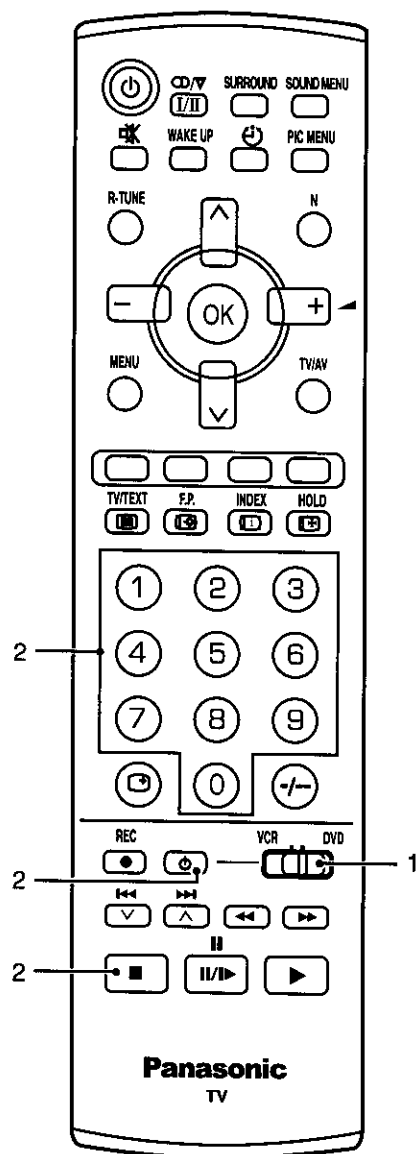
Remote Control Operation is possible for the Panasonic VCR's and DVD's equipment.

After completion of setting, execute the various operations after pressing the VCR/DVD selection switch.

1. Press to select VCR or DVD.

2. While pressing the VCR/DVD Power button, press the manufacturer code (enter the two digit code), and press the VCR/DVD Stop button.
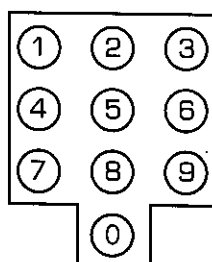
VCR

Manufacturer	Code
Panasonic/National	10,11,12,13

DVD PLAYER

Manufacturer	Code
Panasonic	70,71

Note:

After setting, execute operation confirmation.
If there is no operation, set a different code.

Helpful Hint

(1) The respective VCR/DVD code is cancelled when battery has been exchanged.
Please set it again.
(2) Depending on the model, operation of VCR's or DVD's of the manufacturers listed above may not be possible.
(3) In some cases, new products may not be operative.
(4) It will not operate with other than the above manufacturers.

VCR / DVD

The Remote Control is capable of operating some functions of selected Panasonic VCRs and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions. So to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.
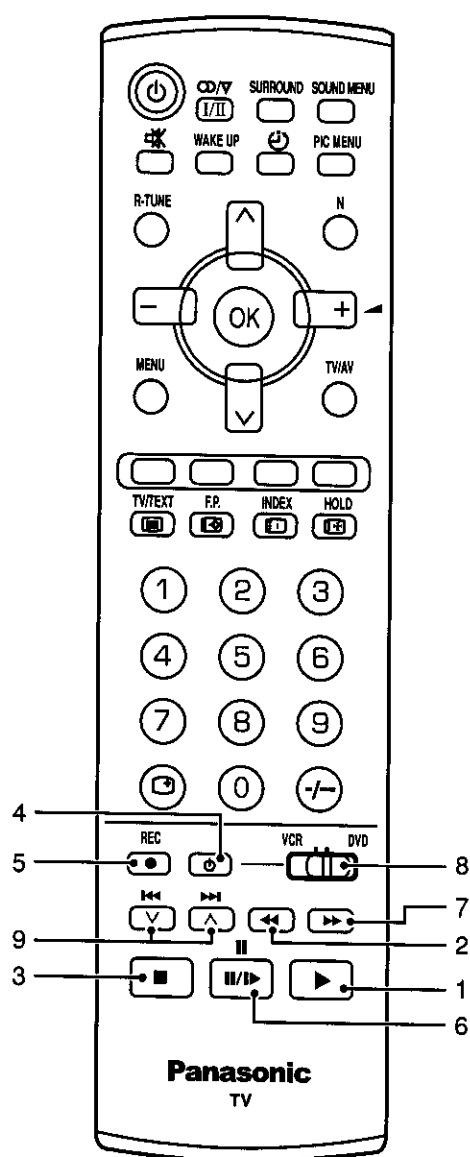
Button	Function	
	VCR	DVD
1. ▶	Play button	
2. ◀◀	Rew (Rewind) / Review button	
3. ■	Stop button	
4. ⏻	Power button	
5. REC ●	VCR REC (Record) button	
6. ∥ ∥/∣	Pause / Still button	
7. ▶▶	FF (Fast Forward) / Cue button	
8. VCR DVD	VCR and DVD Select button	
9. ⏮ ⏭	Programme Number Left and Right buttons for VCR	Programme Skip button

Teletext Operation
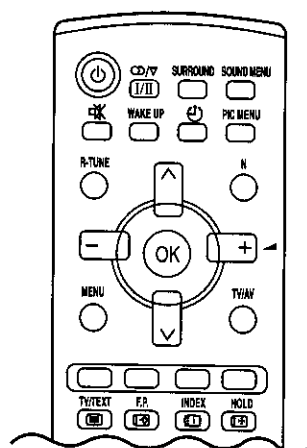
- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- When in teletext mode, the volume may still be altered to the desired listening level.

What is LIST mode?

In LIST mode, four different coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory.

What is FASTEXT?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information of the subjects shown.

What is the advantages?

- Page selection at the touch of a Colour-coded button.
- Easy to use step-by-step selection of the topics subject.
- Reduction of waiting time.
- Page status line at bottom of screen so you always know which button will take you to the desired information.

Note:
- While in Text mode, press menu key on remote once will display the text menu list in four colours which are Red, Green, Yellow and Cyan. The rotation of the displayed is as below:

First press: REVEAL (red) and F/T/B (green), Display Cancel (yellow) and TIME TEXT (cyan).
Second press: LIST (red) and F.TEXT (green).
Third press: Brightness.
Fourth press: Contrast.
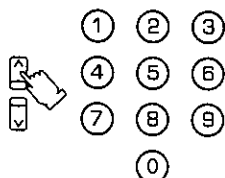Fifth press: Fine Tune.
Sixth press: Normal Text.

Note:
- For the Brightness, Contrast and Fine Tune, control is same as normal tv mode.
These menu adjustment also valid by used panel menu & volume up/down key while in text mode.

TV/Teletext mode

By pressing the TV/TEXT button, to change the TV/Teletext mode as follows:
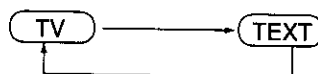
Page Selection

Page can be selected in two ways:

a) Press [∧] or [∨] to increase or decrease the page number by one.
b) By entering the page number, using 0 ~ 9 on the Remote Control.

Hold

Press to hold the current page.
Press again to cancel the hold.

Colour-coded buttons

In Fastext mode these correspond to the differently coloured subjects.

Index

Press INDEX to return to the main index page.

Full/Top/Bottom

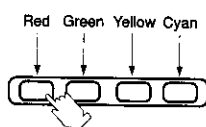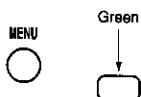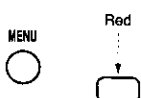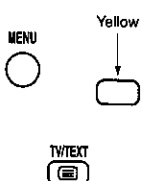Press ○ to display special functions, followed by **Green** button.

Press the **Green** button again to expand the BOTTOM half.
Press again to return to normal (FULL) size.

Reveal

Press ○ to display special functions, followed by the **Red** button to reveal hidden words e.g. quiz page answer.
Press again to hide.

Display Cancel

Press ○ to display special functions, followed by **Yellow** button to view the normal TV programme. When the desired Sub-page is received, the "TEXT" message appears at the top left of the screen.

Press ⬚ to exist the normal TV mode.

Note:
- This features is to cancel the Text display and to exist the display cancel function.
- During in text mode, position up or down button can change the text page number.
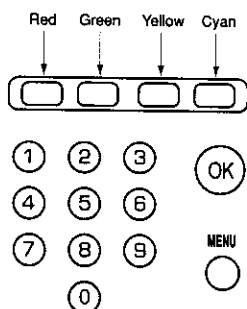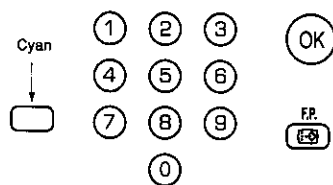
List/F.Text

Press ○ button twice to display LIST/F.Text mode pages.

Press the list (**Red** button) and enter the new page number.
How to store page number?
Press and hold (OK), the page numbers will change to white indicating that the page is stored.
To exist from the LIST mode page.
Press ○ button twice and press F.Text (**Green** button) to view the normal text page.

Favourite Page (F.P.)

Stores a Favourite Page in memory for instant recall. To store such a page, the TV must be in LIST mode.
Press the **Cyan** button, select the page number, then press and hold (OK).
The page number is now stored.

Press ⬚ to recall this page.

Sub Coded Page Access

The TEXT Menu will be displayed in TEXT mode. When teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. It is possible to enter your required sub page and continue watching the normal programme until the correct sub page is found. Select the required page number using buttons 0-9.

If the top of the page indicates that sub pages are being transmitted yet the page does not change, then the number at the top of the page is there to indicate that the broadcaster has updated the page's contents, there are no sub pages.
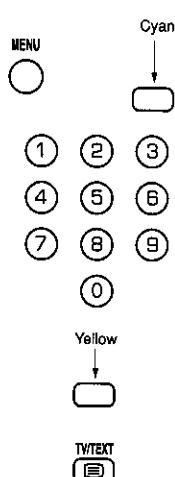
Press MENU followed by **Cyan** button to request Time Text Page.

T**** will be displayed at the top left of TV screen and enter desired Sub Page number before T**** disappears.
To select page number 6, enter 0, 0, 0 and 6.
Press Display Cancel (**Yellow** button) to view a normal TV programme and indication display on the top left of the screen.

When the page is available, press TV/TEXT button to view the Sub page.

Troubleshooting

Before calling for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	**Sound**	
Snowy Picture	Noisy Sound	Aerial location, direction connection
Multiple Image	Normal Sound	Aerial location, direction connection
Interference	Noisy Sound	Electrical appliances Cars / Motorcycles Fluorescent lamps
Normal Picture	No Sound	Volume (Check whether the mute function has been activated on the Remote Control.)
No Picture	No Sound	Not plugged into AC outlet Not switched on Contrast and Brightness / Volume Setting (Check by pressing the Power Switch or Stand-by Button on the Remote Control.)
No Colour	Normal Sound	Colour control
Scrambled	Weak Sound	Re-tune channels
Colour Patches	Normal Sound	Magnetic interference from unshielded equipment. Receiver moved while "ON"
No Colour	Noisy Sound	Sound System Colour System

Specifications

Power Source : AC AUTO 110-240V, 50/60Hz
Power Consumption : 79 W
Receiving System : 17 SYSTEMS

	SYSTEMS		FUNCTION
1. 2. 3. 4. 5. 6. 7.	PAL B,G,H PAL I PAL D,K SECAM B,G SECAM D, K SECAM K1 NTSC M (NTSC 3.58 / 4.5MHz)		Reception of broadcast transmissions and playback from video cassette tape recorders.
8. 9. 10. 11. 12. 13. 14.	NTSC 4.43 / 5.5MHz NTSC 4.43 / 6.0MHz NTSC 4.43 / 6.5MHz NTSC 3.58 / 5.5MHz NTSC 3.58 / 6.0MHz NTSC 3.58 / 6.5MHz SECAM I		Playback from special VCR only.
15. 16. 17.	PAL 60Hz / 5.5MHz PAL 60Hz / 6.0MHz PAL 60Hz / 6.5MHz		Playback from special Disc player and VCR only.

Receiving Channels :

VHF BAND		UHF BAND		CATV	
2 – 12 0 – 12 1 – 9 1 – 12 1 – 12 2 – 13	PAL / SECAM B,K1 PAL B (AUST.) PAL B (N.Z.) PAL / SECAM D NTSC M (JAPAN) NTSC M (U.S.A.)	21 – 69 28 – 69 13 – 57 13 – 62 14 – 69	PAL G,H,I / SECAM G,K,K1 PAL B (AUST.) PAL D,K NTSC M (JAPAN) NTSC M (U.S.A.)	S1 – S20 1 – 125 C13 – C49 S21 - S41 Z1 - Z37 5A, 9A	(OSCAR) (USA CATV) (JAPAN) (HYPER) (CHINA) (AUST.)

Tuning System : Frequency synthesizer Auto search tuning: 100 position.
Picture Tube : 51 cm, measured diagonally, 90° deflection.
Audio Output : 3.5 W × 2 (Speaker)
Aerial Impedance : 75 Ω Unbalanced coaxial.

Video/audio terminal:	DVD	Y	1.0 Vp-p, 75 Ω
		P_B	0.7 Vp-p, 75 Ω
		P_R	0.7 Vp-p, 75 Ω
		Video In	1 Vp-p, 75 Ω
		Audio In	Approx. 0.5 V, 47 kΩ
	Monitor Out	Video Out	1 Vp-p, 75 Ω
		Audio Out	Approx. 0.5 V, 1 kΩ

Remote Control Transmitter : N2QAJB000080
Battery : R6 (AA) × 2
Dimension (W × D × H) : 510 × 489 × 486 mm
Weight (Net) : 25 kg

Note:
Design and Specifications are subject to change without notice.

Customer's Record

The model number and serial number of this product can be found on its cover. You should note this serial number in the space provided below and retain this book plus your purchase receipt as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number _____   Serial Number _____

Matsushita Electric Industrial Co., Ltd
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